REMARKS

Claims 1 – 44 are pending in this application.

In a Non-Final Office Action mailed 06 February 2008, claim 29 was objected to because of an informality. Claim 29 has been amended. Additionally, claims 22 – 29 have been amended to correct typographical errors.

In a Non-Final Office Action mailed 06 February 2008, claim 30 has been rejected under 35 USC §102(e) as being anticipated by McNiff et al. (US Patent No. 6,807,150, hereinafter "the McNiff Patent"). Additionally, claims 1, 2, 5, 6, 8, 9, 11, 12, 15, 16, 18, 19, 21, 31, 34, 35, 37, and 38 have been rejected under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of He, et al. (US Patent Application Publication No. 2004/0057456, hereinafter "the He Publication"). Claims 40 – 42 and 44 have been rejected under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of Lanzafame, et al. (US Patent Application Publication No. 2003/0026275, hereinafter "the Lanzafame Publication"). Additionally, claims 3, 4, 13, 14, 32, 33, and 43 have been rejected under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of the Lanzafame Publication. Claims 7, 10, 17, 20, 36, and 39 have been rejected under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of Yazdy, et al. (US Patent Application Publication No. 204/0017806, hereinafter "the Yazdy Publication"). Additionally, claims 22 – 28 have been rejected under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of Mesiwala (US Patent Application Publication No. 2002/0027880, hereinafter "the Mesiwala Publication"). Finally, claim 29 had been rejected under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of Bostrom, et al. (US Patent Application Publication No. 2005/0047402, hereinafter "the Bostrom Publication").

Anticipation Rejection Of Independent Claim 30

The Examiner rejected independent claim 30 under 35 USC §102(e) as being anticipated by US Patent No. 6,807,150 issued to McNiff, noting with respect thereto:

> In claim 30, McNiff et al. disclosed the method for transmitting data packets from a first communication device to a second communication device via the IP-based network using a first transmission protocol that does not retransmit transmitted packets that are at least one of lost and damaged (see fig. 1, and fig. 2, column 1, lines 40-67, column 2, lines 1-20. The caller A 18 is the originating device, and Caller B 18 is the destination device. The switch 12 is the port circuit for transmitting information to the destination device. The packet network 14 is the internet. As shown in fig. 2, the call control module 30 monitors the network quality and it also performs switching between transmission protocols based on certain conditions, and these conditions are packet loss measurements, packet delay measurements, and bit error rate measurements. Some transmission protocols are TCP, IP, UDP, etc. As we already know that TCP is used for retransmission, and UDP does not perform retransmission. Therefore, we can consider during transmission using UDP that the UDP does not transmit lost or damaged packets; determining that network performance of said IP-based network is insufficient to transmit quality data signals using the first transmission protocol (see fig. 1, and fig. 2, column 1, lines 40-67, column 2, lines 1-20). The module 30 monitors the quality metric of the communication session and switch the session if necessary; and changing from transmitting data packets using a first transmission protocol to transmitting data packets using a second transmission protocol that provides for retransmission of transmitted packets that are at least one of lost and damaged (see fig. 2, module 30, column 2, lines 40-67, column 3, 1-67, column 5, lines 1-67). As shown in fig. 2, the call control module 30 monitors the network quality and it also performs switching between transmission protocols based on certain conditions, and these conditions are packet loss measurements, packet delay measurements, and bit error rate measurements. Some transmission protocols are TCP, IP, UDP, etc. As we already know that TCP is used for retransmission.

Applicants have reviewed the McNiff Patent and the Examiner's stated grounds of rejection, and present the following arguments in support of patentability of independent claim 30, as amended herein.

Applicants' VoIP quality speech system is operable in an IP-based packet switching network and selectively activates a speech transmission mode on the packet switched network that tolerates transmission delays where these delays are not noticeable, such as where the speech transmissions are one way in nature. The VoIP quality speech process is activated when a subscriber accesses a speech quality sensitive resource or in response to an activation of the feature by the subscriber, or when it is determined that the originating subscriber terminal device requires the transmission of high quality speech signals. In the case of lost or damaged packets, the VoIP quality speech system activates a buffer in the originating system to retransmit the missing or damaged packet. When the need for the

high quality speech signals is satisfied, the VoIP quality speech feature can be disabled and the quality speech processing resources released, since the underlying IP-based packet switched network is by default speed optimized.

In contrast, the McNiff Patent teaches the use of two independent switching networks to carry the transmissions between the calling and called parties. The McNiff Patent teaches a first switch coupled to a first telephony device and a second switch coupled to a second telephony device. The first switch and the second switch establish a telephony communication session on a first path on a first transmission network IP Network using a first transmission protocol. The first switch and the second switch can also switch the communication session from the first path to a second path connecting the first telephony device and the second telephony device on a second transmission network (TDM Network), using a second transmission protocol. The McNiff system allows for mid-call switching between the IP and TDM networks to provide low cost connections without sacrificing the quality of service. The quality of service of a connection can be guaranteed by switching from the low cost, less reliable IP network to the more reliable TDM network, if the quality of service deteriorates. This dual network architecture is described in the McNiff Patent as follows:

> Packet network 14 may use any one or combination of suitable packet-based transmission protocols, such as internet protocol (IP), asynchronous transfer mode (ATM), X.25, transmission control protocol (TCP), user datagram protocol (UDP), and internetwork packet exchange/sequenced packet exchange (IPX/SPX). In general, transmission protocols may be any standard procedure for regulating transmissions between two devices and are not limited to packet or TDM protocols.
>
> TDM network 16 represents any collection and arrangement of hardware and/or software allowing TDM-based communications between hybrid switches 12. For example, TDM network 16 may be one or a collection of components associated with the PSTN, LANs, WANs, or other suitable wireline or wireless communications technology. TDM network 16 may communicate information using any suitable transmission protocol for TDM signals. (Column 2, line 54 - column 3, line 20)

This use of an IP Network and a TDM Network to carry the call connection is also illustrated in Figure 3 as follows:

CALL IDENTIFIER	ROUTE TYPE	VOICE ENCODING ALGORITHM	% PACKETS LOST (LAST 10 SECS)	% PACKETS LOST (ENTIRE CALL)	BIT ERROR RATE	...	RE-ROUTE THRESHOLDS
1001011	IP	G.729a	%1.2	%0.9	NA		%10.0/%7.5/NA
1001012	IP	G.711	%13.4	%6.4	NA		%10.0/%7.5/NA
⋮	⋮	⋮	⋮	⋮	⋮		⋮
1001304	TDM	NA	NA	NA	5%		NA/NA/10%
1001305	IP	G.711	%0.7	%0.7	NA		%5.0/%3.0/NA
⋮	⋮	⋮	⋮	⋮	⋮		⋮

FIG. 3

Thus, the McNiff Patent teaches the use of an IP Network connected in parallel with a TDM Network to enable the call connection to be switched between these two networks as the quality of the network connection and the expressed desires of the subscriber dictate. However, in the entirety of the McNiff Patent there is not even a hint of exclusively using a single IP Network to carry the call connection nor is there even a hint of switching between the use of "a first transmission protocol that does not retransmit transmitted packets that are at least one of lost and damaged" and "transmitting data packets on said existing communication connection on said IP-based network using a second transmission protocol that provides for retransmission of transmitted packets that are at least one of lost and damaged" as is specifically recited in Applicants' independent claim 30, as amended. These limitations in Applicants' claim 30 that are not shown or suggested by the McNiff Patent are noted by underlining in the following copy of claim 30, as amended:

> A method for <u>transmitting data signals in a communication connection from an originating device to a destination device exclusively over an IP-based network</u>, comprising:
>
> transmitting data packets from a first communication device to a second communication device via a communication connection established on said IP-based network using a first transmission protocol that does not retransmit transmitted packets that are at least one of lost and damaged;
>
> determining that network performance of said IP-based network is insufficient to transmit quality data signals using the first transmission protocol; and
>
> <u>changing from transmitting data packets using a first transmission protocol to transmitting data packets on said existing communication connection on said IP-</u>

based network using a second transmission protocol that provides for retransmission of transmitted packets that are at least one of lost and damaged.

Therefore, Applicants respectfully maintain that independent claim 30, as amended, is allowable under 35 USC §102(e) over the McNiff Patent, since the McNiff Patent fails to satisfy the requirements of 35 USC §102(e), which are articulated as: "To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." *PPG Industries, Inc. v. Guardian Industrial Corp.*, 75 F.3d 1558, 1566, 37 USPQ2d 1618, 1624.

Applicants also maintain that dependent claims 31 – 39 are allowable under 35 USC §103(a), since these claims depend on an allowable base claim.

Obviousness Rejections of Claims 1 – 29 and 40 – 44

The Examiner rejected claims 1, 2, 5, 6, 8, 9, 11, 12, 15, 16, 18, 19, 21, 31, 34, 35, 37, and 38 under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of US Patent Application Publication No. 2004/0057456 by the He Publication.

With respect to Applicants' independent claim 1, as noted above, the McNiff Patent teaches the use of an IP Network connected in parallel with a TDM Network to enable the call connection to be switched between these two networks as the quality of the network connection and the expressed desires of the subscriber dictate. However, in the entirety of the McNiff Patent there is not even a hint of exclusively using a single IP Network to carry the call connection nor is there even a hint of switching between the use of "network activation means for activating said IP-based network to operate using a packet transmission protocol that does not retransmit transmitted packets that are lost or damaged" and "packet retransmission means, operable independently of said packet transmission protocol and responsive to a transmitted packet being lost or damaged, for activating said port circuit to retrieve the packet from said transmit buffer means for retransmission to said destination device on said existing communication connection on said IP-based network" as is specifically recited in Applicants' independent claim 1, as amended.

The He Publication, as noted in paragraphs [0040] and [0041], teaches the transmission of the entirety of the data from a source device to a destination device, then, "After all the packets are sent

out (whether or not correctly received) and no new user data is generated, the sender may get the total number of packets to be delivered, and then set the retransmission times according to equation (1)." However, the He Publication fails to show or suggest switching between two different transmission protocols in the middle of a data transmission as recited in Applicants' independent claim 1.

These limitations in Applicants' claim 1 that are not shown or suggested by the McNiff Patent are noted by underlining in the following copy of claim 1, as amended:

> A system for transmitting audio signals in a communication connection from an originating device to a destination device exclusively over an IP-based network, comprising:
>
> a port circuit for transmitting data packets, containing encoded speech signals received from an associated originating device, to said destination device via a communication connection established on said IP-based network;
>
> transmit buffer, connected to said port circuit associated with said originating device, for storing a plurality of said data packets received from said associated originating device;
>
> network activation means for activating said IP-based network to operate using a packet transmission protocol that does not retransmit transmitted packets that are lost or damaged; and
>
> packet retransmission means, operable independently of said packet transmission protocol and responsive to a transmitted packet being lost or damaged, for activating said port circuit to retrieve the packet from said transmit buffer means for retransmission to said destination device on said existing communication connection on said IP-based network.

Therefore, Applicants believe that claim 1 is allowable under 35 USC §103(a) over the McNiff Patent in view of the He Publication. Applicants also believe that dependent claims 2 – 10 also are allowable under 35 USC §103(a) over the McNiff Patent in view of the He Publication, since these claims depend on an allowable base claim.

With respect to Applicants' independent claim 11, as noted above, the McNiff Patent teaches the use of an IP Network connected in parallel with a TDM Network to enable the call connection to be switched between these two networks as the quality of the network connection and the expressed desires of the subscriber dictate. However, in the entirety of the McNiff Patent there is not even a hint of exclusively using a single IP Network to carry the call connection nor is there even a

hint of switching between the use of "activating said IP-based network to operate using a packet transmission protocol that does not retransmit lost or damaged packets" and "activating, independent of said packet transmission protocol and in response to a transmitted packet being lost or damaged, said port circuit to retrieve the packet from said transmit buffer for retransmission to said destination device on said existing communication connection on said IP-based network" as is specifically recited in Applicants' independent claim 11, as amended.

The He Publication, as noted in paragraphs [0040] and [0041], teaches the transmission of the entirety of the data from a source device to a destination device, then, "After all the packets are sent out (whether or not correctly received) and no new user data is generated, the sender may get the total number of packets to be delivered, and then set the retransmission times according to equation (1)." However, the He Publication fails to show or suggest switching between two different transmission protocols in the middle of a data transmission as recited in Applicants' independent claim 11.

These limitations in Applicants' claim 11 that are not shown or suggested by the McNiff Patent are noted by underlining in the following copy of claim 11, as amended:

> A <u>method for transmitting audio signals in a communication connection from an originating device to a destination device exclusively over an IP-based transmission medium</u>, comprising:
>
> transmitting data packets, containing encoded speech signals received from said originating device, from a port circuit serving said originating device to said destination device via a communication connection established on said IP-based transmission medium;
>
> storing, in a transmit buffer connected to said port circuit, a plurality of said data packets received from said associated originating device;
>
> <u>activating said IP-based network to operate using a packet transmission protocol that does not retransmit lost or damaged packets; and</u>
>
> <u>activating, independent of said packet transmission protocol and in response to a transmitted packet being lost or damaged, said port circuit to retrieve the packet from said transmit buffer for retransmission to said destination device on said existing communication connection on said IP-based network</u>.

Therefore, Applicants believe that claim 11 is allowable under 35 USC §103(a) over the McNiff Patent in view of the He Publication. Applicants also believe that dependent claims 12 – 20 also are allowable

under 35 USC §103(a) over the McNiff Patent in view of the He Publication, since these claims depend on an allowable base claim.

With respect to Applicants' independent claim 21, as noted above, the McNiff Patent teaches the use of an IP Network connected in parallel with a TDM Network to enable the call connection to be switched between these two networks as the quality of the network connection and the expressed desires of the subscriber dictate. However, in the entirety of the McNiff Patent there is not even a hint of exclusively using a single IP Network to carry the call connection nor is there even a hint of switching between the use of "network activation means for activating said IP-based network to operate using a packet transmission protocol that does not retransmit transmitted packets that are lost or damaged" and "packet retransmission means, operable independently of said packet transmission protocol and responsive to a transmitted packet being lost or damaged, for activating said port circuit to retrieve the packet from said transmit buffer means for retransmission to said destination device on said existing communication connection on said IP-based network" as is specifically recited in Applicants' independent claim 11, as amended.

The He Publication, as noted in paragraphs [0040] and [0041], teaches the transmission of the entirety of the data from a source device to a destination device, then, "After all the packets are sent out (whether or not correctly received) and no new user data is generated, the sender may get the total number of packets to be delivered, and then set the retransmission times according to equation (1)." However, the He Publication fails to show or suggest switching between two different transmission protocols in the middle of a data transmission as recited in Applicants' independent claim 21.

These limitations in Applicants' claim 21 that are not shown or suggested by the McNiff Patent are noted by underlining in the following copy of claim 21, as amended:

> A method of operating a buffer mechanism that is activated when there is an unavoidable pause in delivery of data to a receiving device over a communication connection from an originating device to said receiving device exclusively over an IP-based network comprising:
>
> transmitting data packets, containing encoded speech signals received from said originating device, from a port circuit serving said originating device to said destination device via a communication connection established on said IP-based

transmission medium using a packet transmission protocol that does not retransmit lost or damaged packets;

detecting when a pause in data delivery is necessary;

determining an effect that pauses at specific points in the delivery of data would have on performance of the receiving device;

managing buffering and subsequent delivery of data exclusively over said communication connection on said IP-based network to the receiving device, such that pauses in the data delivery occur at locations that would have a minimal impact on the performance of the receiving device; and

activating, independent of said packet transmission protocol and in response to a transmitted packet being lost or damaged, said port circuit to retrieve the packet from said transmit buffer for retransmission to said destination device on said existing communication connection on said IP-based network.

Therefore, Applicants believe that claim 21 is allowable under 35 USC §103(a) over the McNiff Patent in view of the He Publication. Applicants also believe that dependent claims 22 – 29 are also allowable under 35 USC §103(a) over the McNiff Patent in view of the He Publication, since these claims depend on an allowable base claim.

The Examiner also rejected claims 40 – 42 and 44 under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of US Patent Application Publication No. 2003/0026275 by Lanzafame.

With respect to Applicants' independent claim 40, as noted above, the McNiff Patent teaches the use of an IP Network connected in parallel with a TDM Network to enable the call connection to be switched between these two networks as the quality of the network connection and the expressed desires of the subscriber dictate. However, in the entirety of the McNiff Patent there is not even a hint of exclusively using a single IP Network to carry the call connection nor is there even a hint of "varying a size of said transmit buffer based on input from at least one of said IP-based communication network and a destination system which is on said communication connection and connected to said IP-based communication network" as is specifically recited in Applicants' independent claim 40, as amended.

The Lanzafame Publication teaches the use of a variable size jitter buffer to store information associated with a voice signal in a receiver. The receiver determines the appropriate

adjustment time for making an adjustment to the size of the buffer based in part on a result of a signal detection operation performed on the received signal.

These limitations in Applicants' claim 40 that are not shown or suggested by the McNiff Patent are noted by underlining in the following copy of claim 40, as amended:

> A method for transmitting data packets in a communication connection from a transmit buffer to a destination system exclusively via an IP-based communication network, comprising:
>
> transmitting data packets, containing encoded speech signals received from said originating device, from a port circuit serving said originating device to said destination device via a communication connection established on said IP-based transmission medium using a packet transmission protocol that does not retransmit lost or damaged packets;
>
> providing a transmit buffer for temporary storage of data packets to be sent across a communication connection established on an IP-based communication network;
>
> storing in said transmit buffer at least one data packet that is transmitted across said IP-based communication network;
>
> varying a size of said transmit buffer based on input from at least one of said IP-based communication network and a destination system which is on said communication connection and connected to said IP-based communication network; and
>
> activating, independent of said packet transmission protocol and in response to a transmitted packet being lost or damaged, said port circuit to retrieve the packet from said transmit buffer for retransmission to said destination device on said existing communication connection on said IP-based network.

Therefore, Applicants believe that claim 40 is allowable under 35 USC §103(a) over the McNiff Patent in view of the Lanzafame Publication. Applicants also believe that dependent claims 41 – 44 are also allowable under 35 USC §103(a) over the McNiff Patent in view of the Lanzafame Publication, since these claims depend on an allowable base claim.

Additionally, the Examiner rejected claims 3, 4, 13, 14, 32, 33, and 43 under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of the Lanzafame Publication. The Examiner also rejected claims 7, 10, 17, 20, 36, and 39 under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He

Publication, as applied to claim 1 above, and further in view of US Patent Application Publication No. 204/0017806 by Yazdy, and claims 22 – 28 over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of US Patent Application Publication No. 2002/0027880 by Mesiwala. Finally, the Examiner rejected claim 29 under 35 USC §103(a) as being unpatentable over the McNiff Patent in view of the He Publication, as applied to claim 1 above, and further in view of US Patent Application Publication No. 2005/0047402 by Bostrom. In responding to the rejection of Applicants' independent claims above, Applicants have addressed the rejections of these dependent claims and believe that all of these dependent claims are allowable, since they depend on allowable base claims.

In view of the above amendments and remarks, Applicants believe the pending application is in condition for allowance. Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-1848, under Order No. 013217.0188PTUS from which the undersigned is authorized to draw.

Respectfully submitted,
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